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R&D Budget Cutting Begins, With Worst Yet to Come

The growth is gone and cuts are coming, but House Republicans are demonstrating some selectivity in dealing with research funding as they fulfill their campaign promises to whack federal spending.

The biggest reductions have been in the industrial-research programs that flourished over the past two years in a harmony between the Clinton White House and the now-gone Democratic Congress. So far, basic research has been only modestly trimmed.

Rescissions of over $500 million were voted by the House February 22 in the Pentagon's Technology Reinvestment Project (TRP), which aims to promote the development of so-called dual-use technologies, i.e., those that can serve military and civilian purposes. Pentagon chiefs defend the program as the best way to develop the technologies they need in an era of shrinking military markets. Republicans contend TRP contributes nothing to military strength and invites pork-barrel dealings.

The TRP take-back consists of $77 million left unspent from fiscal 1994, plus $425 million appropriated for this year.

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If the reductions make it through the legislative mill, which looks likely, TRP is dead. The Defense Department announced last week that the next competition for TRP awards has been "indefinitely delayed."

On the same day that it scuttled the Pentagon program, the House also rescinded $107 million for the Advanced Technology Program (ATP) at the National Institute of Standards and Technology (NIST). A fast-growing Clinton favorite, ATP orchestrates and subsidizes consortia of industrial firms with common research interests. ATP remains alive, since it started the fiscal year with an appropriation of $431 million. But here, too, the prospects are not bright.

The day after the full House cut ATP, the House Appropriations Subcommittee for NIST went back and cut out another $46 million in funds for NIST's own laboratory programs, plus a manufacturing extension program modeled on the agricultural extension system, and the Baldrige prize for industrial quality.

The Republican House leadership has encountered effective resistance in some areas, e.g., in trying to shift the food stamp program to the states. But the lopsided vote on research, 262-165, indicates that the leadership can act as it pleases in this area.

The reigning research policy in Republican circles says basic research is worthy of government support because society at large benefits from it and alternative finance is scarce. Industrial research, however, can lead to profits, and should be left to industry, which knows best, say the Republicans. So far, the pattern of budget cuts has been pretty much along those policy lines.

The National Science Foundation came out of a rescission-minded review of its budget with its research accounts left intact by its Appropriation Subcommittee. But the Subcommittee voted to take back $131 million in NSF funds appropriated last year for the construction of academic research facilities. In other times, NSF officials would be grieving at this loss, but in the present circumstances they

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In Brief

The Name Game: Bullied by Congress last year to support "strategic" research, i.e., research of economic value, NSF Director Neal Lane acknowledged last week that the term has caused confusion. Testifying before the House Science Subcommittee on Basic Research, Lane said, "We prefer to talk about research in strategic areas," adding that undirected basic research can be strategic. "One of our researchers," Lane said, "was surprised to find his research listed under the heading of advanced manufacturing."

Science Committee Chairman Robert Walker (R-Pa.) noted "tough, lean times," but stressed, "We do intend to maintain the basic research mission." Rep. Constance Morella (R-Md.) told Lane, "I have a soft spot in my heart for what you do."

How does the National Cancer Institute allocate its money among various types of cancer? NCI says the question is meaningless. Still, cancer lobbies regularly clamor that their interest is shortchanged. The latest rundown, from the Congressional Research Service, lists breast cancer at the top, with $313 million this year, followed by lung cancer, $113 million; colo-rectal, $89 million; skin cancer, $67 million; prostate, $59 million; cervical, $46 million; ovarian, $38 million; uterine, $7.2 million, and vaginal and other, $6.1 million.

The old-boy system appears to be melting—but slowly—at the National Academy of Engineering, where 5 women were included in the newly elected class of 77 members, thus raising the number of women in the 1790-member organization to 34. Last year, the NAE elected 2 women. The National Academy of Sciences is a trifle less male. Nine women were included in last year's class of 60 new members, bringing female membership to 85 out of 1710.

In 1st Round, Minor Reductions for NIH, NSF, NASA

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feel they have eluded catastrophe.

The same Subcommittee took only $66 million from NASA's current budget of $15 billion, a mercy which reflects Speaker Newt Gingrich's passion for space and particularly the Space Station, which was untouched.

The National Institutes of Health was treated kindly by its House Appropriations Subcommittee, which took only $70 million from this year's budget, all of it in construction funds. Nothing was taken back from NIH research appropriations.

Though the House has frequently been running night and day, the Congressional budget process is actually just beginning. The action so far has been confined to the House and has been focused on retrieving some of the money that the last Congress appropriated for this fiscal year, 1995, which ends September 30. The Senate, less ideologically ferocious than the House, is yet to have its say on taking back the previously appropriated money. Just starting now are Congressional deliberations on the budget that Clinton proposed on February 6 for fiscal 1996. And that's where federal R&D, basic research included, may encounter fiscal mayhem.

With their holy commitments to deficit reduction, tax cuts, increased defense spending, and the sanctity of Social Security, the Republican majorities are in a desperate drive to cut federal civilian programs. And sitting there, in the discretionary—which means the most accessible—part of the federal budget is some $72 billion in R&D programs.

No wonder, then, that Rep. George Brown (D-California), former Chairman of what's now called the House Science Committee, forecast calamitous reductions last month in the adjacent excerpt from his address to the American Association for the Advancement of Science.

How hard will Bill Clinton fight for his barebones R&D budget? High expectations are not warranted. The public has at best a foggy understanding of the federal role in research. The President is not likely to make a do-or-die stand for the National Science Foundation. In fact, in a scurrilous episode that has not drawn the opprobrium it deserves, Clinton took the Proxmire route in his latest State of the Union Address, ridiculing the expenditure of "a million dollars to study stress in plants," and vowing that with a line-item veto, such nonsense would not survive.

The project, financed by the Agricultural Research Service, was defended in a letter to Clinton by the American Society of Plant Physiologists, which explained the goals of enhancing plant resistant to heat, cold, weeds, insects, etc.

The inclusion of that passage in the Presidential address invites wonder about the pecking-order status of the Office of Science and Technology Policy and its Director, John Gibbons, the President's Assistant for Science and Technology. Did Gibbons or someone in OSTP get a pre-delivery look at that speech, as is customary for senior White House staff? And if they did, why wasn't the offensive line flagged? And if it was, why did it survive? Makes you wonder.—DSG

A 25% R&D Cut Predicted

From an address by Rep. George Brown (D-California) at a symposium on "What is the Future for the Physical and Mathematical Sciences?" February 17, at the annual meeting of the American Association for the Advancement of Science, in Atlanta.

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The magnitude of the cuts that are looming [in federal R&D funds] boggles the mind. I recently expressed my disappointment at President Clinton's research and development budget, which proposes essentially flat funding for FY '96. And his budget cuts only maintain the annual deficit at current levels and add another trillion dollars to the national debt over the next five years, and pay for a $56 billion tax cut over the same period.

The Republicans intend to both balance the budget *and* offset a tax cut that has been conservatively estimated to cost $200 billion over the next five years.

This will require about a trillion dollars more in cuts than the President is proposing. What this will mean to federal R&D funding is anyone's guess. My own prediction is for a 25 percent cut in total R&D funding, with some areas suffering even more....

I cannot begin to describe the magnitude of federal funding cuts that will affect research and development, especially at research universities. But I fear they will be deep and broad....

We can no longer deny the excess capacity, or more correctly, unfocused capacity in our higher education system. Our graduate degree-granting institutions can no longer support the PhDs they are graduating. A clear indication of this is the fact that 40 percent of college faculty members today are part-time employes, up from 22 percent in the early 1970s.

This army of gypsy professors illustrates both the financial pressure on higher education and the excess of PhDs for whom their higher education training directs them solely toward employment in higher education....

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Feder, Stewart Rapped for Letter on NIH Stationery

In a sparkling display of asininity, the National Institutes of Health has issued an "Official Reprimand" to its long-troublesome duo, Ned Feder and Walter Stewart, accusing them of violating a 1993 order to refrain from pursuing scientific misconduct at government expense. Their offense: writing a letter on NIH stationery.

"This action is a flagrant violation of my directive to you that you are not to use government resources for activities related to scientific misconduct," they were advised in a letter dated February 15 from L. Earl Laurence, Acting Deputy Director and Executive Officer of their workplace, the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK).

Though reprimanding them only for the use of "NIDDK letterhead," Laurence's letter raised the possibility of other transgressions: "If you used other NIDDK resources, including xeroxing facilities," Laurence warned, "this would be in further violation."

The basis of the reprimand was their use of NIDDK stationery in sending a disputed report and a peppery letter on the Gallo case to Kenneth J. Ryan, Chairman of the Commission on Research Integrity of the Department of Health and Human Services. The Commission, appointed by HHS Secretary Donna Shalala, was assigned to gather information and recommend policies for promoting rectitude in the Department's research activities.

As it turns out, however, Laurence had given the pair written permission last October to accept an invitation to testify before the Ryan Commission. Permission came in a letter from Laurence to Feder and Stewart stating: "It is the practice of [NIDDK] to make the members of the staff available to any duly constituted commission of the Department of Health and Human Services."

In the course of their appearance, in November, they were asked by a member to supply any additional information that they thought might be useful for the Commission's work. The material that drew the reprimand, Feder and Stewart insist, was sent to the Commission in response to that request, with a covering letter on NIDDK stationery.

Seasoned masters of bureaucratic dodgem, Feder and Stewart sent a memo to Laurence last week requesting withdrawal of the reprimand. "The situation," they wrote, "is truly Kafkaesque: we forward information on the Gallo fraud—a major scientific fraud that affects the public health. We receive, not a response to the scientific fraud, but a complaint that we used the wrong letterhead." They also cited various statutes and regulations requiring federal employes to report wrongdoing.

Though NIH is stewing about Feder, Stewart, and the Gallo report, Commission Chairman Ryan, a Professor at the Harvard Medical School, apparently finds the document of some interest. Regarding a copy sent to him by a Feder-Stewart ally, Serge Lang, Professor of Mathematics at Yale, prior to the dispatch of the Feder-Stewart copy, Ryan responded with gratitude. In a letter thanking Lang for the report, he stated he would "have it reproduced for all our Commission members," adding, "It obviously should inform our work and help in our deliberations."

Prepared by Congressional staff, but never officially released, the report says the renowned Robert C. Gallo, of the National Cancer Institute, misrepresented his role in the identification of the AIDS virus and US government officials let him get away with it [SGR, February 15].

In their letter accompanying the report, Feder and Stewart wrote to Ryan that the Gallo case reflects serious failings of scientific integrity. Commending the report, and suggesting that Ryan's Commission could profit from it, the Feder-Stewart letter stated that Gallo's "misconduct was unusually broad in its scope, with repeated, substantial, public misrepresentations made by Dr. Gallo and his colleagues over a period of several years, in scientific journals, in sworn statements, and in other forums...." They urged Ryan and his colleagues to get on the case, as they also did in a letter to NIH Director Harold Varmus.

Like most everything else in the Gallo case and in Feder-Stewart operations, nothing is simple in this latest outburst of acrimony. Feder and Stewart achieved notice in scientific and Congressional circles starting in the mid-1980s when they unilaterally dropped their laboratory work at NIH and devoted themselves to studies and investigations of scientific misconduct. So-called whistleblowers and others with grievances concerning scientific ethics flocked to them. For a time, they served as consultants to Congressman John Dingell in his celebrated forays concerning scientific misconduct.

The management and much of the staff of NIH disdainfully regarded Feder and Stewart as failed scientists seeking publicity. But many scientists with sound credentials praised their work as accurate, important and reflective of the science establishment's refusal to take the misconduct issue seriously. Until 1993, NIH tolerated their operations. But when they fed a controversy over Lincoln scholarship into their computerized "plagiarism" detector, NIH had enough and reassigned them to routine administrative duties, with strict orders to stay off the misconduct beat on government time.

The report for which they were chastised was produced by comrades in arms on the staff of Rep. Dingell during his long reign of terror as Chairman of the House Energy and Commerce Committee and its Subcommittee on Oversight and Investigations.

In preparation for three years, the report seemingly reflects Dingell's interest in issues of scientific misconduct involving federal funds. But, recalling the sour press commentary that Dingell reaped from his prior lashings of the scientific establishment, several staffers in Dingell's inner circle advised against publication. The manuscript was completed, but the internal dispute at the Committee was unresolved when the November election returned Dingell to

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. . . Reply, on NIH Stationery, Contests the Charges

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office but toppled him from his chairmanships.

Having no good regard for products associated with the venomously partisan Dingell, his newly installed Republican successors on the committee never even considered publishing the report. However, the Dingell ex-staffers who worked on the Gallo case took matters into their own hands by printing and distributing a small number of paper copies and putting the document on the Internet: World Wide Web: http://nyx10.cs.du.edu:8001/~wstewart/

Though the product of Congressional staff members, the report has an ambiguous status, since it was never officially issued by a Congressional committee. Feder and Stewart gingerly refer to it as a "draft" report, though that word does not appear on the report or an accompanying summary.

The status of the report has been further clouded by an ambiguous letter from Dingell to NIH Director Harold Varmus, to whom Feder and Stewart also sent a copy of the Gallo report. In an accompanying letter to Varmus, they urged him to root out evil in his biomedical domain—a suggestion that reportedly did not sit well with the NIH chief.

In his letter to Varmus, former Chairman Dingell says of the Gallo report that time ran out on the approval process, and he therefore "cannot vouch for the authenticity or the accuracy of the papers provided to you." He had not reviewed the manuscript, Dingell stated, nor had other members or the staff director of his Committee. He also noted that "an early draft on the matter had been rejected by the Subcommittee staff director several months ago"—not unusual in publishing in Congress or elsewhere. "Drafts and relevant files on this inquiry were turned over to the incoming majority as a pending and uncompleted matter," Dingell reported. With the emphasis on the uncompleted review, the letter does not add up to a disavowal of the report, but does come close.

Former members of Dingell's staff tell SGR that his letter conjures up a Congressional peer-review system that, in fact, did not exist. They say that the Gallo report, densely laden with scientific terms and concepts, was both unintelligible and uninteresting to the political types around Dingell. With little or no review, other reports from the Dingell empire had been printed and officially released essentially as written, the ex-staffers report.

In the case of the Gallo report, publication was delayed, and time ran out, the Dingell alumni insist, because Dingell drew a lot of bad press from his hearing-room exchanges on scientific misconduct with Bernadine Healy, when she was Director of NIH, and Nobelist David Baltimore. While Dingell and his aides were still undecided about what to do, the Republican takeover occurred.

In any case, Dingell's letter to Varmus was another irritant contributing to the Feder and Stewart reprimand. The letter from NIDDK Executive Officer Laurence pinned the reprimand on their use of NIDDK stationery in writing to the Ryan Commission, but it also stated another grievance, namely: "that your use of Institute letterhead incorrectly suggests that you acted in an official capacity—with the knowledge, resources, and approval of the organization. The gravity of your action is reflected by the fact that Representative John Dingell saw fit to write to NIH Director Harold Varmus a letter indicating that the report you distributed was not an official congressional report."

Quoting Dingell's distancing remarks about the Gallo report, the reprimand letter states that by using NIDDK stationery, "you have wrongly implicated this Institute in your action, thereby placing this organization in an extremely difficult position vis-a-vis the congressional subcommittee whose report you distributed." The Laurence letter continued: "I want to emphasize again that any work you do relative to issues of scientific misconduct is not within the NIDDK mission and must be done on your own time, with your own resources, and under your own private aegis."

Though warning against further offenses, he indicated that forgiveness lies ahead: "This Office Reprimand will be made part of your Official Personnel Folder (OPF) for a period of no more than two years" he advised Feder and Stewart, "at which time it will be removed and destroyed."

Following the arrival of Laurence's letter, Feder and Stewart wrote to Chairman Ryan, asking him to help scrub the reprimand, which they noted arose from their appearance before the Commission he heads. The actions against them "pose a challenge to the Commission," they stated, and they asked: "if the Commission is unable or unwilling to protect its own witnesses when they furnish information to the Commission in response to a request, how will it protect future witnesses who furnish information...?"

Their letter was on stationery of the National Institute of Diabetes and Digestive and Kidney Diseases.—DSG

Contest Opens for NAE Post

Open and fierce competition for the presidency of professional societies is pretty rare, but not so at the National Academy of Engineering, where a maverick candidate is making his second run for the top spot in the face of strong opposition from the NAE's inner circle.

The choice is between the official candidate, selected by the NAE's nominating committee, Cornelius Pings, President of the Association of American Universities, and a so-called petition candidate, Harold Liebowitz, former Dean of Engineering at George Washington University. Running as a petition candidate four years ago, Liebowitz received 42 percent of the vote against incumbent Robert White, who will retire in June after 12 years in the job. Liebowitz contends that the NAE has fallen asleep and needs a shakeup. The establishment privately concedes that maybe it does, but says he's not the one to do it. Meanwhile, lots of letters pro and con the candidates are zipping around the country. The ballots will be tallied in April.

OTA Supporters Argue Congress Needs the Agency

The Director and Congressional supporters of the Office of Technology Assessment (OTA) appealed to its moneymasters in the House last week to spare the agency from the Republican budget-slashing juggernaut.

The omens are not favorable. One OTA supporter told SGR that the best hope is for survival on a severely reduced budget. The $23 million OTA is seeking for next year can't do much for deficit reduction, but a wipeout or a big cut would serve as a symbol of the new frugality on Capitol Hill. For starters, the House voted last week to take back $650,000 from the $22 million that the last Congress provided OTA for this year.

Though managed by a bipartisan board of Senators and Representatives, OTA is viewed by some in the new Republican majorities as a vestige of the long Democratic control of Congress. After the election, the Senate Republican Conference marked OTA for termination on its 1995 agenda [SGR, December 15].

Testifying before the House Appropriations Subcommittee that votes money for Congressional operations, OTA and company encountered polite but seemingly puzzled questions about the role of the agency and whether it could be filled elsewhere.

The Subcommittee Chairman, Rep. Ron Packard, of California, asked why OTA's work couldn't be farmed out to universities, national laboratories, or handled by two other Congressional support organizations, the General Accounting Office (GAO) or Congressional Research Service (CRS).

OTA Director Roger C. Herdman replied that university overhead costs would probably push expenditures beyond OTA levels, which average out to about $125,000 per study. He also suggested that "it's hard to get a group without an ax to grind." Referring to one of OTA's latest studies, on the proposed Princeton Tokamak fusion reactor [see In Print, P. 8], Herdman said he wouldn't assign the study to Princeton and would be concerned about the possibility of conflicts of interest in other universities.

But OTA, he said, came to the subject without any personal interest. "I don't care whether Princeton gets the Tokamak," Herdman said. After a study is completed, he pointed out, OTA is there to answer questions, whereas an outside contractor would probably disband the study group because the money had stopped coming.

Rep. Ray Thornton (D-Arkansas), a Subcommittee member and a strong OTA booster, noted the wide spread in university overhead rates. Johns Hopkins, he said, "is in the range of 80 percent," whereas "my own university [the University of Arkansas] is 38 percent."

"Take one major university and reduce its indirect costs to 60 percent," Thornton said in a fanciful exercise in academic finance, "and you'd pay for OTA."

As for folding OTA into one of the other Congressional agencies, Director Herdman insisted it wouldn't work. "You can't take OTA people and put them in GAO," he said. He noted that GAO is "an audit agency," and, with some 5000 employes, "is a big bureaucracy," whereas OTA, with 143 at present, is small and nimble.

Herdman spoke highly of the Congressional Research Service, but when asked to compare it to OTA, he characterized CRS as a quick-response agency that mainly retrieved existing knowledge for inquiring members of Congress. OTA, in contrast, was described as enlisting over 5000 *pro bono* specialists nationwide to collect and synthesize information. With the inhouse staff orchestrating these talents, OTA produces "a whole new product," Herdman said.

Unstinting support for OTA was expressed by Rep. Amo Houghton, a New York Republican and former Corning Glass Works executive, who chairs OTA's Congressional Board. Describing OTA as "a jewel of an organization," Houghton said OTA's costs are trifling in comparison to the savings from the research and insights it provides Congress. The critics of OTA, Houghton said, do not include scientists, venture capitalists, or corporate CEOs. When Corning had to economize, Houghton said, it left research untouched. Congress should do the same with OTA, he suggested.

Former Science Committee Chairman George Brown (D-California), a veteran member of OTA's Congressional Board, also pleaded for the agency. "The OTA staff is not made up of geniuses," Brown said, "but what they do is bring together the geniuses of this country." Brown said OTA's major fault was in failing to make itself better known to the rank and file of Congress—a reference to OTA's policy of taking assignments only from committee chairmen.

Herdman said remedies for that problem were under consideration. He also said he's open to all suggestions for making OTA more responsive to Congressional needs—a reference to complaints about OTA's leisurely production pace and wordy publications.

When Brown finished his testimony, Subcommittee Chairman Packard provided one of the few signs of a favorable response. "I read your testimony last night," Packard told Brown, "and wrote on top 'very persuasive.' "

Support for OTA was also delivered by another Board member, Rep. Jim McDermott (D-Washington), who is a psychiatrist and one of the few physicians in Congress, and Rep. Vic Fazio (D-California), senior Democrat on the Subcommittee. "There's no benefit to anybody to wipe this out," McDermott said, "and a big loss." If OTA is eliminated, Fazio said, "We wouldn't miss it until it was gone." And he vowed, "I am going to fall on my sword to keep OTA alive."

Chairman Packard, who dominated the questioning, concentrated on financial matters in the final minutes of the hearing, asking detailed questions about OTA's rent, recent staff reductions, and related financial and staffing matters.

The chorus for OTA encountered no competition at that hearing. But other voices were heard by the House Subcom-

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NSF Board Pleads for Care in Cutting Science Funds

The National Science Board (NSB), policymaking body for the National Science Foundation, usually sticks to NSF matters. But with budget turmoil spreading throughout the federal scientific establishment and beyond to its grantees, the Board last month appealed for caution and orchestration in reducing government support for research.

The NSB statement, approved at its February 2-3 meeting, opened with a pro forma acknowledgement that, along with everything else in government, "no federal program in science, mathematics, and engineering should be beyond careful scrutiny and possible reduction."

Then it got to the point: "In the process of funding realignment, the abrupt termination of large fractions of the support from any one agency without careful regard for its impact on the health of research in the US can jeopardize the overall government-university partnership for carrying out fundamental research directed to national needs and training the next generation of scientists and engineers.

"As one or another federal agency adjusts its research investment in response to legislated revisions of its missions," the statement continued, "it is important that the impact on key national capabilities be considered in a broader context.

The Board, chaired by Frank Rhodes, former President of Cornell University, normally consists of 24 senior types from academe and industry. But, as often happens with the NSB, politicians are slow in filling its vacancies. Seven nominees for eight memberships that expired last May have not yet been confirmed by the Senate, and the White House has not yet picked the eighth. Coming up May 10: another eight expirations of membership. The unconfirmed serve as consultants, without voting rights. The political neglect is not good for the NSB's morale or prestige.

OTA *(Continued from Page 5)*

mittee and its Senate counterpart at a joint hearing on February 2. On that occasion, the value of OTA was strongly disputed by a witness from a think tank with great clout in today's conservative circles, David M. Mason, Director of the Heritage Foundation's US Congress Assessment Project.

OTA's claim of "independence or disinterestedness is not overwhelming," Mason said, contending that "Professional standards in these fields are sufficient that a Congressional debunking office or truth ministry is not really necessary.

"As for speed," he continued, "the question is what is Congress in a hurry to do? One implication of having an OTA is that Congress is in a position to choose winning and losing technologies, a task at which the government, or any central planner, will fail."

To the extent that Congress requires technical analysis, Mason said, it could allocate funds for staff slots on standing committees. "In summary," he concluded, "Congress can get along without OTA, and that is the reason, in this [budget] environment, to eliminate it."

Toting up the odds, the OTA camp sees that the agency is virtually unknown to Republican freshmen. And since its principal contacts with Congress were through committee chairmen, though with some deference to ranking minority members, it is not too well known among the new crop of Republican chairmen and other leaders.

A couple of days after the hearing, the Capitol Hill grapevine reported that the pro-OTA arguments had made a favorable impression on Subcommittee Chairman Packard. But the word was that the Republican leadership has already made up its mind to eliminate OTA.

The Senate budget hearing is tentatively scheduled for March 24. The final verdict will probably come in the late spring. OTA is not optimistic about its fate.

Job Changes & Appointments

John C. Toole, Executive Director of High Performance Computing for the Department of Defense Advanced Research Projects Agency, has been appointed Director of the government-wide High Performance Computing and Communications Program. He succeeds ***Donald Lindberg***, who held the computing post while also serving as Director of the National Library of Medicine.

Andrew Friede, Chief of the Public Health Information Systems Branch at the Centers for Disease Control and Prevention, has been appointed Director of the Lister Hill National Center for Biomedical Communications, the research and development arm of the National Library of Medicine.

Catherine Gaddy, Assistant Director of the Office of Program Consultation and Accreditation at the American Psychological Association, has been named Executive Director of the Commission on Professionals in Science and Technology. She succeeds ***Betty M. Vetter***, who headed the Commission for 30 years until her death in November. ***Eleanor Babco***, Associate Director of the Commission, has been appointed Deputy Executive Director.

John H. Ewing, Professor of Mathematics at Indiana University, has been appointed Executive Director of the American Mathematical Society, succeeding ***William H. Jaco***, who plans to leave in August for the Grayce B. Kerr Professorship of Mathematics at Oklahoma State University.

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From Springer-Verlag, international publishing firm:

The Chemical Intelligencer ($69 per year for institutions; $29 for individuals), a new quarterly "focusing on the history and culture of chemistry," which Springer-Verlag says is modeled on another of its publications, *The Mathematical Intelligencer*. Included are reports on "famous chemists, molecular modeling, new applications in research, the public face of chemistry, and a regular section titled 'The Cooking Chemist.' " The first issue includes an interview with Linus Pauling shortly before his death. The editor is Istvan Hargittai, Professor of Chemistry, Institute of General and Analytical Chemistry, Budapest Technical University, H-1521 Budapest, Hungary; e-mail: hargittai@ch.bme.hu

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From the US Geological Survey (USGS):

1995 National Assessment of United States Oil and Gas Resources (USGS Circular 1118; 20 pp.; also a CD-ROM, USGS DDS-30, with backup data, maps, etc.; both at no charge for single copies), reports estimates of undiscovered oil and gas resources are similar to the last assessment, published in 1989. But estimates of "future reserve growth of existing oil and gas fields are significantly larger." Using new data from DOE, the report says the new assessment "includes more categories of oil and gas resources, including tight gas sandstones, coalbed gas, and fractured shales."

Order from: USGS Branch of Distribution, Denver Federal Center, Box 25286, Denver, Colorado 80225; the CD-ROM can be ordered by e-mail: acd@bpgsvr.cr.usgs.gov

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From the American Institute of Physics:

Physics News in 1994 (57 pp., $5), 25th in AIP's annual series on major developments in physics, starting with acoustics and astrophysics and running down the list to polymer physics and vacuum physics. The reports, mostly in lay language, were prepared AIP's member societies and edited by Phillip F. Schewe and Ben P. Stein.

Order from: American Institute of Physics, c/o AIDC, PO Box 20, Williston, Vt. 05495-0020; tel. 1/800-809-2247; in Vermont: 802/862-0095.

From the International Council of Scientific Unions (ICSU):

Science International (quarterly, no charge), news about meetings past and planned, publications, awards, committee appointments, etc., from the worldwide umbrella for scientific collaboration, which currently embraces 92 national academies and research-sponsoring organizations and 23 single-discipline international scientific unions, plus various other entities. The publication is in magazine format, with 48 pages in the December issue.

Order from: ICSU Secretariat, 51 Blvd. de Montmorency, Paris 75016, France; tel. (33-1) 4525-0329; fax (33-1) 4288-9431.

From the Aerospace Industries Association (AIA):

Aerospace Facts and Figures 1994-1995: Environmental Stewardship Through New Technology (176 pp., $25, plus $5 for shipping in the US and Canada, $8 elsewhere, plus local sales tax), statistics on military and civilian production, foreign and domestic sales, employment, research and development, etc., for aircraft and space systems, compiled by the Washington-based AIA, a trade association which includes all the major and many lesser aerospace firms.

In a foreword, Association President Don Fuqua says these are hard times for the industry because of defense shrinkage, but commercial stirrings indicate that the "long term future is bright." The report's subtitle, "Environmental Stewardship," invites wonder. The only reference to environment in the 176-page report is in a half page of large type that says the industry is striving to be environmentally responsible.

Order from: Aerospace Industries Association, 1250 Eye St. NW, Washington, DC 20005-3924; tel. 202/371-8561; fax 202/371-8470.

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In Print

Official reports and other publications of special interest to the research community

(Copies of publications listed here are available from the indicated sources—not from SGR)

From the Congressional Office of Technology Assessment (OTA):

The Fusion Energy Program: The Role of TPX and Alternate Concepts (GPO Stock No. 052-003-01403-3; 87 pp., $6.50), a "background paper"—meaning short by OTA standards—concerning the premier uncertainty in federal energy-research policy: whether, and if so at what pace, to proceed with the Tokamak Physics Experiment (TPX), a $700-million facility awaiting a go-ahead for construction at Princeton University. If the TPX succeeds, billions more will be needed to reach the collaborative international goal of a prototype commercial magnetic fusion generating plant by about the year 2040. OTA doesn't say yes or no to TPX, the "centerpiece" of the US program. But, noting that for budgetary reasons, fusion alternatives to the TPX have been sidetracked, OTA observes that "there is merit in examining them as part of a broad fusion program." OTA adopts an equal-opportunity stance toward alternatives, listing the credible ones, such as inertial fusion, and the incredible, cold fusion, describing the latter as discredited, but still continuing in Japan with a reported $5 million in government funds last year. The report lists other big questions, but offers no answers: What can fusion do for long-term energy needs, what levels of research are justified, and how should the program be shaped in a budget-reduction era? The OTA report was delivered last month as the new Republican majorities hacked away at federal spending. The expense of TPX makes it an attractive target, but as a potentially big-payoff technology beyond the means of industry, it meets the Republican standard for government support. The outcome is still unsettled. Robin Roy of the OTA staff was Project Director for the report.

Order from: New Orders, Superintendent of Documents, PO Box 371954, Pittsburgh, Pa. 15250-7954; tel. 202/512-1800; fax 202/512-2250. Four-page summary free from OTA: tel. 202/224-8996.

From the General Accounting Office (GAO), no charge:

Former Soviet Union: US Bilateral Program Lacks Effective Coordination (GAO/NSIAD-95-10; 56 pp.), says federal agencies trying to help the former Soviet Union have been snarled in bureaucratic strife, which GAO attributes to weak leadership from the State Department and a quest for dominance by the US Agency for International Development (USAID), the main bankroll for these efforts. Citing reports of "frequent and lengthy disputes," the GAO says agencies, unnamed, complain that "USAID does not cooperate with them and relegates to them the role of contractor rather than collaborator." The agencies covered in the report include the Departments of Energy and Commerce, the Environmental Protection Agency, the Food and Drug Administration, and the Centers for Disease Control and Prevention. There's no discussion, however, about two big ones in ex-Soviet aid, NSF and NASA.

School Facilities: Condition of America's Schools (GAO/HEHS-95-61; 65 pp.), based on returns from a sample of school officials, GAO says about two-thirds of the nation's elementary and high-school buildings are "in at least overall adequate condition." Upgrades to "good overall condition" would cost about $112 billion, the report says, while estimating that $11 billion is needed over the next three years to comply with federal health, safety, and accessibility mandates. In reporting the backlog, GAO notes the passage last year of the federal Education Infrastructure Act, which provided $100 million for grants to schools for repairs, renovations, etc. The report was requested by Senators Moseley-Braun, Kennedy, Pell, Simon, and Wellstone.

Cholesterol Measurement: Test Accuracy and Factors That Influence Cholesterol Levels (GAO/PEMD-95-8; 69 pp.), says individual fluctuations and variations in test accuracy befuddle NIH's decade-long National Cholesterol Education Program, designed to encourage testing and prudent diets. The GAO said inaccurate readings can lead to needless interventions or neglect of health problems. In response, the Department of Health and Human Services did about all it could do, telling the GAO that the accuracy of the readings isn't all that bad, but could be improved.

Aviation Safety: Data Problems Threat FAA Strides on Safety Analysis System (GAO/AIMD-95-27; 30 pp.), finds fault with the quality of data going into the Federal Aviation Administration's Safety Performance Analysis System, "an automated decision support tool" that the FAA is developing for early identification of hazards. The GAO also questions the reliability of cost estimates for the system's software. The report was requested by Senator John McCain, Chairman of the Aviation Subcommittee of the Commerce, Science and Transportation Committee.

Order from: USGAO, PO Box 6015, Gaithersburg, Md. 20884-6015; tel. 202/512-6000; fax 301/258-4066.

From the Engineering Workforce Commission of the American Association of Engineering Societies:

Engineers: A Quarterly Bulletin on Careers in the Profession (16 pp.; current issue free; annual subscriptions: $15 for members of affiliated societies; $25 for others), an expansion of the Commission's *Bulletin*, the new version makes its debut in a January edition reporting sagging salaries, a weak job market, and other economic woes for engineers. The overall mood is gloomy, starting with the opening article: "Compensation: No Recoveries in Sight." The Association is made up of major engineering societies, with total memberships of over 800,000.

Order from: American Association of Engineering Societies, Suite 608, attn. Paulette Lashley, 1111 19th St. NW, Washington, DC 20036-3690; tel. 1/800-658-8897; in the Washington, DC, area: 202/296-2237; fax 202/296-1151.

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